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LATE NEWS

Creditors' and stockholders' representatives agreed to Northeast Utilities' boosted $2.3-billion offer for Public Service Co. of New Hampshire (see p.3). Final approval would be needed from state lawmakers, creditors, stockholders, and PSNH bankruptcy court. See also p.13.

PWCC weighs options. See below.

ABB buys C-E, see p.13.

PacifiCorp thinks bigger, offers $2B for Arizona PS

PORTLAND, OR—PacifiCorp offered Pinnacle West Capital Corp. (PWCC) $1.7 billion in cash Nov. 8 for all the common stock of its wholly owned electric utility subsidiary Arizona Public Service Co. A stock exchange for preferred shares raises the offer to $2.08 billion.

The offer, if accepted and approved—two very large "ifs"—would create a utility with commanding control of transmission resources in the West.

PWCC, financially burdened with cash-hungry subsidiaries, including MeraBank thrift, immediately acknowledged the offer, but refused additional comment. Book value of APS is $1.95 billion. PWCC's Nov. 7 stock value was $824 million, according to *The Wall Street Journal*. (See p.12 for PWCC's dismal third-quarter results.)

Diversified PacifiCorp won approval for a merger with Utah Power & Light Co. Jan. 9, after 17 months. During interviews with EL&P for the 21st Utility of the Year award (Nov., p.1), executives said they wouldn't rule out another merger opportunity.

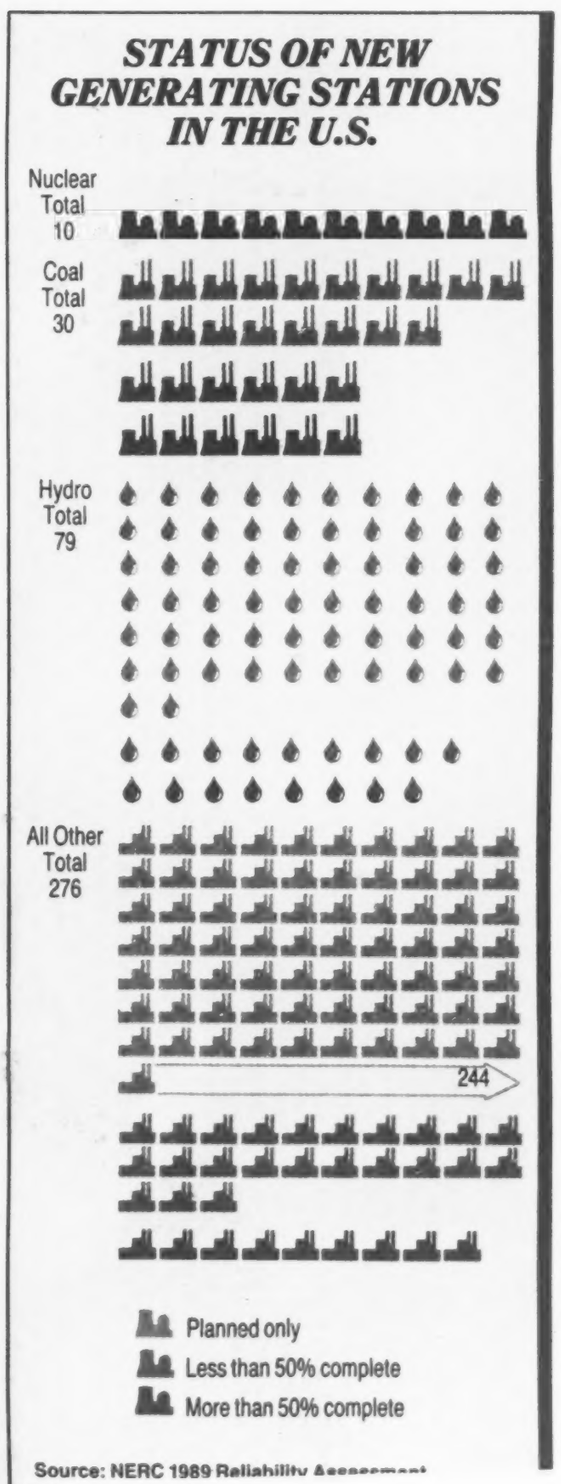
"Combining the electric operations of PacifiCorp with APS will produce the substantial savings that are necessary to contain electric prices for APS electric customers," said A.M. Gleason, PacifiCorp president and CEO.

The benefits would offset rate increases resulting from APS investments in generation, he said. Seasonal demand advantages would reduce the need for future resource additions for both companies.

APS would retain some autonomy

APS would become part of PacifiCorp Electric Operations, along with Pacific Power and Utah Power, Gleason said. APS would also continue to operate from Phoenix with its own officers, as well as a board that would include directors selected from existing APS members and communities. APS would be represented on PacifiCorp's board.

The offer proposed that APS preferred stock be exchanged for equivalent preferred PacifiCorp stock or cash and that APS first mortgage bonds remain outstanding and secured by its properties.



FPL wins more than Deming quality prize

MIAMI—Florida Power & Light Co. won the Japanese Deming Prize for Quality Control. More than that, because of the 18-month application process, FPL increased efficiency and cut complaints.

First non-Japanese firm to win

FPL, the main subsidiary of FPL Group Inc., is the first non-Japanese firm to apply for—and the first to win—the prize since international firms were invited to participate in 1984.

Robert E. Tallon, FPL president, explained that achievements at FPL included:

- Reduced average length of customer service interruptions from 100 minutes in 1982 to 48 minutes in 1989.
- Reduced fossil power-plant outage rate from 14 percent in 1986 to less than 4 percent in 1989, saving ratepayers an estimated $300 million in avoided cost for new generation.
- Lowered customer complaints to the Florida Public Service Commission to the fewest in 10 years.

The Union of Japanese Scientists and Engineers created the prize in 1951 to honor American quality pioneer W. Edwards Deming.

June drill helped quake recovery

SAN FRANCISCO—On June 2, 100 Pacific Gas & Electric Co.'s managers responded to an earthquake. On Oct. 17 the Bay Area responded.

June's "quake," a drill with characteristics nearly like the deadly Oct. 17 actual quake, may have saved lives.

"The training that climaxed with our June emergency exercise paid huge dividends when we confronted the impact of the real thing on October 17," said Richard A. Clarke, PG&E chairman and chief executive officer.

In fact, the drill anticipated more destruction (*EL&P*, Oct., p. 18).

"Our gas and electric systems both came through the quake in excellent shape—better than in the June scenario," Clarke said. "The underlying strength of the system, together with our employees' skills, fine training, and great spirit, enabled us to return to near-normal operating conditions quickly."

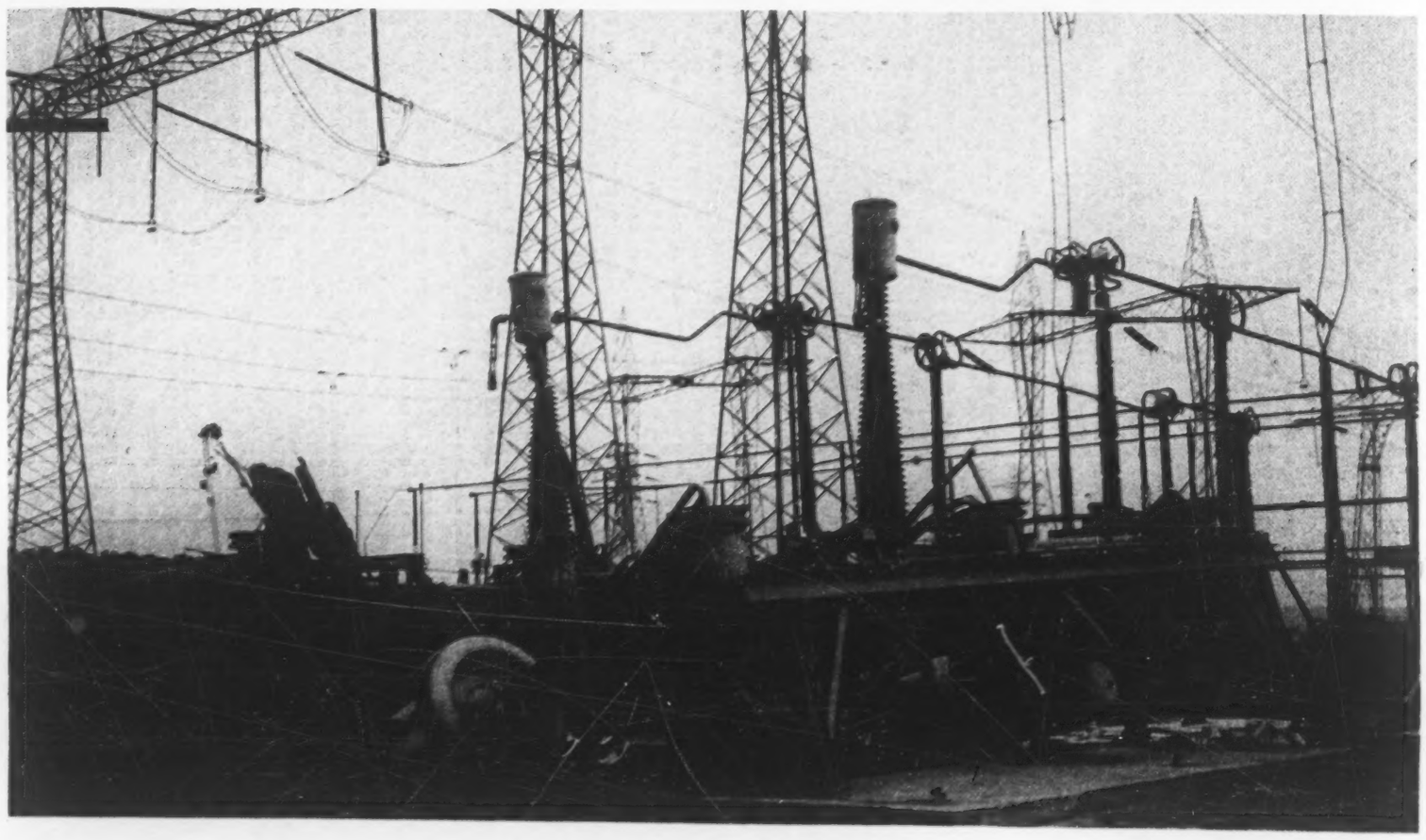
The earthquake, originally put at 6.9 on the Richter scale, was upgraded to 7.0. Immediately after it hit, an Emergency Operations Center was set up as a central meeting place for officers and managers.

PG&E estimated damages near $100 million on Oct. 21, but officials said exact figures would take more time.

The 750-MW Moss Landing Unit 6, which is natural gas-fired, sustained damage. Its switchyard is shown below and on page 14.

A 217-MW Potrero unit, supplying much of the city, tripped off with the quake. The Navy's USS Lang docked at Pier 70 near the plant and rigged hoses

Continued on page 14



This PG&E 500-kV switchyard at Moss Landing was devastated by the Oct. 17 earthquake. The 500-kV yard at Metcalf was also heavily damaged as was the San Mateo Substation. Those helping area utilities included San Diego Gas & Electric, Southern California Gas & Electric, Western Area Power Administration, the Department of Energy, Sierra Pacific, Southwest Gas and

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News Briefs

JILL MINNER, Special Projects Editor

CILCORP acquisition adds to environmental service operations

CILCORP Inc. has signed a definitive agreement to acquire the stock of Hunter Environmental Services Inc.'s environmental consulting and analytical service businesses. According to CILCORP, parent company of Central Illinois Light Co., the acquisition will add about 750 professionals and 150 support personnel to its existing environmental service operations.

FERC sets ROR

The Federal Energy Regulatory Commission set its quarterly benchmark rate of return for electric utilities at 12.04 percent. According to the commission, the benchmark rate of return applies to rate filings made by jurisdictional electric utilities between Nov. 1, 1989 and Jan. 31, 1990.

Idaho Power is nearing loads, resource balance

Idaho Power Vice President for Power Supply Jan Packwood said the utility is nearing the time when its average generating capability will equal its firm energy delivery obligations. Since Idaho Power implemented new energy sales agreements with Sierra Pacific Power Co. and UAMPS, the company has been approaching loads and resource balance, while retaining some existing surplus generating capacity for its own system, according to Packwood. Currently, the utility said it is only interested in mid-term sales opportunities shaped around its seasonal energy surpluses. "During at least the next decade, we believe we'll be able to meet our energy obligations with improved efficiencies at existing power plants, conservation programs and cogeneration and small hydro purchases," stated Packwood.

NRC issues report on NU's Millstone 1 and 2

After making its Systematic Assessment of Licensee Performance at Northeast Utilities' Millstone Units 1 and 2, the Nuclear Regulatory Commission found that worker morale is generally high and that management has an aggressive attitude toward safety. The commission's report also revealed that, "a substantial majority of employees felt their concerns were adequately addressed through existing systems, including discussion with their supervisors." Both nuclear units earned high marks in meeting performance requirements according to the NRC. The inspection was conducted from Jan. 1, 1988 to June 15, 1989, and included a confidential survey of Millstone employees to evaluate the credibility of the company's Employee Concerns Program.

Minnesota Power, NSP settle contract dispute

Minnesota Power said it has settled out of court with Northern States Power Co. regarding a disagreement over the validity of a 1986 contract between the two companies. The contract provided for NSP's purchase of a 40-percent interest in Minnesota Power's Clay Boswell Generating Unit 4. The companies have agreed to void the original contract and establish a new one. Under the new agreement, NSP will purchase 200 MW of peak load electricity from Minnesota Power between May 1990 and October 1993.

NRC proposes revisions for licensing of radwaste repository

The Nuclear Regulatory Commission has proposed amendments to its regulations for licensing the Department of Energy's construction and operation of a high-level radioactive waste repository. Some of the proposed revisions relate to procedures for the admission of initial and late-filed contentions. Other revisions include: requiring a party sponsoring a contention to present direct testimony and not to rely solely on cross examination to prove its case; making mandatory the entire hearing schedule set forth in a model hearing schedule; and prohibiting the NRC's Licensing Board or Appeal Board from raising issues which have not been placed in controversy by the parties involved in the proceeding.

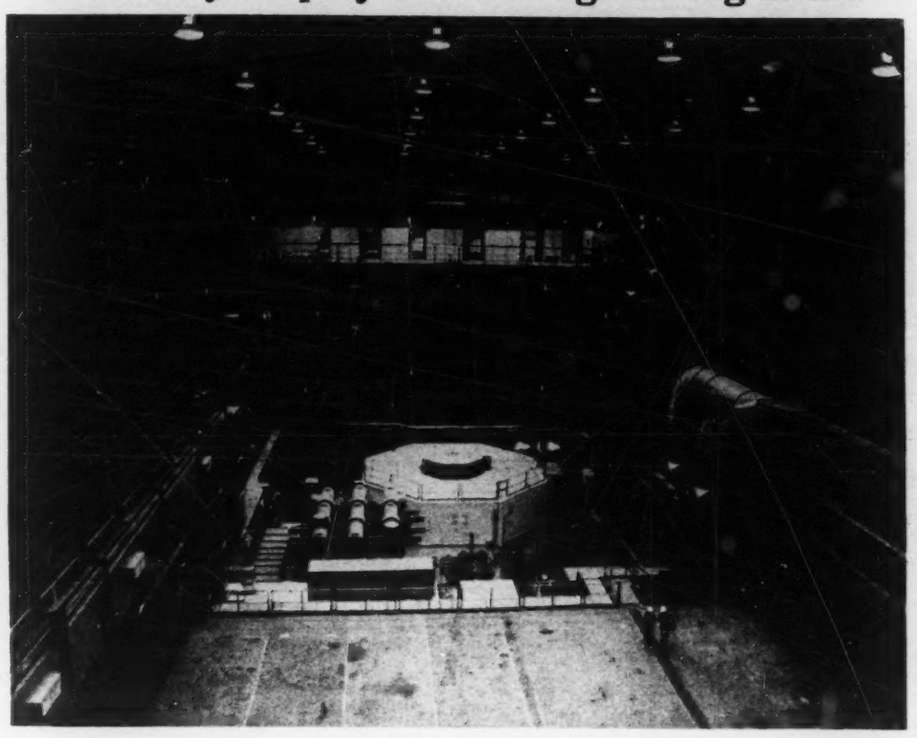
Braun appointed ANS executive director

The American Nuclear Society has named Joseph C. Braun executive director. Braun will take over the position on Jan. 1, 1990, replacing Octave Du Temple who has served as executive director for 32 years. According to ANS, Braun has 25 years experience in the nuclear industry, and worked most recently for Combustion Engineering as director, reactor technical baseline program.

Former SW Bell head takes over at KPL Gas

KPL Gas Service announced the appointment of John E. Hayes Jr. as its chairman, president and chief executive officer. Hayes, who resigned last January as chairman, president and chief executive officer of Southwestern Bell Telephone Co., succeeds David S. Black who retired in September. William E. Brown had served as interim president since Black's retirement.

SoCalEd hydro project wins engineering award



Southern California Edison Co. announced that its Balsam Meadow hydroelectric project has been honored by the American Society of Civil Engineers with California's 1989 Outstanding Civil Engineering Achievement Award. According to the utility, the award is given for "the engineering project that demonstrates the greatest engineering skills and represents the greatest contribution to civil engineering, progress and mankind." Construction of the Balsam Meadow plant, the newest addition to SoCalEd's Big Creek hydroelectric system, involved blasting four miles of tunnels through solid granite and excavating a cavern 1000 ft below ground to house a 200-MW power station.

Gressette to be SCANA chairman, pres. & CEO

Lawrence M. Gressette Jr. has been chosen as SCANA Corp.'s chairman, president and chief executive officer, as well as chairman and chief executive officer of all SCANA subsidiaries, effective Feb. 1, 1990. Gressette has served as president and treasurer of SCANA Corp. and vice chairman of SCE&G. John A. Warren, who will retire as chairman and chief executive officer Jan. 31, will continue as a member of the board and as chairman of the executive committee.

New president named at Dominion Energy

Tyndall L. Baucom succeeded the retiring Ronald H. Leasburg as president of Dominion Energy, the independent power subsidiary of Dominion Resources. Baucom was previously president of Dominion Lands, and served as vice president responsible for fossil and hydro operations at Virginia Power. Leasburg will serve as a consultant to Dominion Capital in connection with the development of a major hydroelectric plant in Louisiana.

New Hampshire Yankee president responds to NRC violation notice

New Hampshire Yankee President Edward A. Brown recently responded to the U.S. Nuclear Regulatory Commission's Notice of Violation regarding the circumstances surrounding the shutdown of Seabrook Station's reactor on June 22, 1989. The commission issued a violation and assessed a $50,000 civil penalty against New Hampshire Yankee. In response Brown said that, "The findings contained in the NRC's report are consistent with our own review, and we accept them. We intend to pay the civil penalty without delay." But in order to put the situation in perspective, Brown also stressed two points that the NRC made in its notice. The commission stated that, "reactor plant safety was never in question," and that the violation and civil penalty were issued "to emphasize the importance of maintaining the necessary attention to, and control and oversight of, activities at your facility."

GMP wins top award for 1988 annual report

Green Mountain Power Corp. said it received *Financial World* magazine's Bronze Award for annual reports produced by U.S. electric, telephone and gas utilities with less than $1 billion in assets. Over 1200 companies entered their 1988 annual reports in the competition, GMP said.

Utilities fined by NRC

The U.S. Nuclear Regulatory Commission recently proposed the following fines:

Northern States Power Co.
A $25,000 fine for use of commercial grade equipment at the Prairie Island Nuclear Power Station without determining its adequacy for use in safety systems.

In This Issue

Industry News

Florida Power & Light Co. wins Japanese quality award. 1
Utilities clean up after earthquake. 1
Greenhouse Effect debunked at Illinois Energy Conference. 3
Demand-side management professionals form association. 14

T&D Technology

EPRI project seeks ways to reduce cost of reclassifying PCB-transformers. 24
Embedded steel poles can be substituted for large transmission wood poles. 24
Focus Report on protection features ways in which T&D engineers, planners and operators can keep their power system up and running—at least most of the time. 27
ICUEE '89—the "everything works" exhibition—was a big success in Louisville. 30

Generation Technology

Power plant O&M costs show coal is beating nuclear, and getting better. 16
Joint Power Conference changes its focus from the past to the future. 16
Hawaiian geothermal projects are picking up steam. 18
PowerGen '89 Conference will focus on improving generation productivity. 19

Regular Features

Commentary, Letters 4
Financial Performances 12
Rate Activity 15
Information/Control Systems 23
Safety and Training 33
Calendar 34
Bulletin Board 35
New Products 42
Readers' Service 43
Regulatory Review 48
Management Methods 49

COMMENTARY

Selling off America's productive capacity

Commitment. It's a word that has been the cornerstone of electric service for decades. It's what has produced the most abundant, reliable and low-cost electric power supply system in the world. It's what makes utility managements swallow cost increases as long as possible before seeking rate relief. It's what puts linemen up on poles and in bucket trucks during the worst of storms. It's what led Midwest, Southern and Northeastern utilities to send work crews to South Carolina, where they worked around the clock to help restore power after Hurricane Hugo.

Commitment also is a word that has come to have less and less meaning to the managements of many of the suppliers to electric utilities. Far too many company managements no longer are in business to make quality apparatus. Rather they're in business only to make money. And if those managements aren't good enough to make and market equipment at a profit, then the easier fix is to make a deal for shareholders and sell out.

During the past few years, there have been many potential buyers waiting in the wings. Many of these are foreign companies, waiting for a chance to buy into the American market at bargain prices. The opportunities have been numerous. Many managements of industry suppliers have been leaders in the sellout of American productive capacity and technology...to foreign organizations...some even while denying that possibility.

For example, two years ago, I received an immediate response from Westinghouse Electric Corp. after I ran an editorial in which I mentioned how a number of U.S. suppliers to the industry were downsizing operations or selling them off to foreign interests. Westinghouse T&D executives insisted that Circle-W was committed to the American electric utility industry. They insisted that I visit a series of Westinghouse facilities to observe that commitment firsthand. I visited, I saw and I was impressed with what appeared to be *deep* commitment. But just a few months later, Westinghouse announced it was entering into joint ventures with Asea Brown Boveri in both T&D and generation (the latter subsequently was killed off by the government because of potential anti-competitive issues). But there were options in the 50-50 joint venture under which ABB could buy Westinghouse's interest. It was clear from the beginning, although not officially confirmed until last April, that the Westinghouse-ABB name was merely a short-term convenience; ABB would be the successor company. Since Westinghouse had gotten rid of several other T&D product lines earlier, by next January Westinghouse will effectively be out of the T&D business.

Please don't misunderstand. I *understand* foreign companies wanting to buy their way into the U.S. utility market. Moreover, I have been impressed by ABB for some time. The commitment of Percy Barnevik, ABB chairman, to the electric utility industry worldwide is apparent in the way the company is managed and the way its people operate. I can think of no other offshore supplier management, and very few domestic managements, that I would rank as high in terms of ethics and principles, or in terms of dedication to quality, performance of its products and development of new technology. In fact, the growing presence of ABB in the U.S., including the recently announced Combustion Engineering acquisition, may well have a strong positive influence on the entire electric utility apparatus market.

I'm just saddened that our own American managements haven't been capable of adjusting to today's market realities and remaining viable.

Season's Greetings to all

As the year draws to a close, *Electric Light & Power's* editors would like to thank all our readers for their loyalty in the past year and our advertisers for their support. You've all helped *EL&P* close out the decade on a high note, with the best readership and highest advertising revenues in our history. We're all deeply appreciative and promise we will do everything in our power to make 1990 even better.

Robert A. Lincicome, Editor-in-Chief

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LETTERS

Offshore cooperation is suspect

I read with great interest your recent article (Oct., p.1) on DOE funding of advanced reactor design, particularly the discussion of the GE Simplified Boiling Water Reactor (SBWR). Included in the list of participants in the SBWR project, which will be funded by DOE, were Hitachi and Toshiba of Japan, Ansaldo of Italy and KEMA/NUCON of the Netherlands. Based on past occurrences and common sense, I say it is probable that these foreign companies will absorb as much of the SBWR technology as possible and strive to develop it into a marketable product, which will likely end up being marketed to utilities in the United States.

I'm sure there are many reasons why the United States is not maintaining its international competitiveness, but it sure doesn't help when we fund technology development for overseas companies, which they then sell back to us. It would be in the long-term interests of General Electric and the USA if foreign companies were to be excluded from technology development funded by the U.S. taxpayer.

William C. Moore
Evans, GA

Surge protection no joke

We were astonished to read in your October edition, (p.4) the letter by Mr. Dennis M. Zogbi, in which he dismisses the surge protection industry as "a big joke" and implies that the industry has conned the public into buying products that do not work.

While we would be the first to admit that there have been a significant number of shady practitioners in the surge protection business (such as those claiming to reduce your utility bill), our experience has been that the large companies are honest and market products which perform as advertised.

We do not know where Mr. Zogbi received his education in the finer points of common sense, but it clearly did not include much about the physics of lightning or transient overvoltages.

Lightning is considered for all practical purposes to be a current, not a voltage source. The typical lightning strike delivers one or more current pulses, which typically have 20,000 to 100,000 amperes peak current, a risetime of a few microseconds and a duration of up to 100 microseconds.

Little of this surge current finds its way inside a building, even when lightning stikes the building itself or the power line very close to it. Surge current measurements on lightning arresters on overhead distribution lines rarely show currents over 10 or 20 kA. These values probably represent the limits of surge currents likely to be seen at the service entrance.

Furthermore, the low insulation strength of low-voltage wiring restricts surge voltages (and hence currents) through flashover. It is very difficult to drive lightning currents of more than 5 kA or so into building wiring, data or telecommunications circuits. This was the reason that the ANSI Standard C.62.41-1980 adopted an impulse current of 3 kA, 8x20 microseconds as typical of the indoor environment beyond the service entrance.

Hybrid surge suppression circuits containing MOVs, gas tubes, silicon avalanche diodes and other linear and non-linear circuit components can, and do, protect computers and sensitive electronic equipment from surges of this magnitude.

We at EFI Electronics Corporation not only demonstrate the capability of our surge suppressors to protect sensitive equipment from surges, including lightning, but we also warrant that they will do so, and will pay for repairs to protected equipment if they do not.

It may not make sense to Mr. Zogbi that the little box under the desk will protect his computer against lightning surges, but if he would like to visit our laboratory, we will show him how we do it! We further invite him to examine the many letters written by our customers, who have lost every electronic device in their facility, except those protected by the so-called "big joke" TVSS devices.

Meanwhile, perhaps Mr. Zogbi would like to confine his remarks to areas within his field of expertise. His superficial comments on surge suppression make us question the credibility of his market survey of the industry.

Michael F. Stringfellow, Ph.D., P.E.
Director of Research
and
David A. Bell, Ph.D., P.E.
Vice President of Research
EFI Corp.
Salt Lake City, UT

WP&L's transmission access program

I was dismayed to learn that *EL&P* had taken its "hat off" to Wisconsin Power & Light Company for becoming "the first utility in the country to announce that it is actively seeking permission from the FERC to make its transmission system available to any and all wholesale customers that might want to purchase energy from someone else."(Oct., p.4).

Wisconsin Electric Power Company has had a general wheeling tariff on file at FERC for nine years. The company has been providing transmission service under this tariff to wholesale customers for six years. Since its inception, the amount of energy wheeled across the Wisconsin Electric system has increased dramatically. In 1990, the provision of transmission service will provide more than $1-million dollars to lower the company's costs to serve our retail and other wholesale customers. We've also signed up four investor-owned utilities for wheeling service under the general tariff. In fact, Wisconsin Electric has been wheeling power for WP&L for a year and a half.

In the future, I would hope *EL&P* would choose to recognize the many utilities around the country who have been quietly wheeling for wholesale customers for a long time. Far from being the first in the country, our fraternal neighbor to the west wasn't even the first on its block.

Patrick E. Woodke
Manager-Rates
Wisconsin Electric Power Co.
Milwaukee, WI

Editor's note: Apologies to Wisconsin Electric Power and other utilities that already may be providing open access to their transmission systems, even though we didn't give them credit for it. Like we said, we saluted WP&L for being the first utility we were aware of to announce that it was actively seeking wheeling customers.

In the future, we would hope that WEPCo and others would tell us what they are doing, so we can give credit where due, when it's due.